Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1 (currently amended). An air sampler comprising:

an air moving arrangement disposed to be operable to move air over a sampling media, the air moving arrangement having an adjustable operating speed;

an integrated airflow sensor disposed to be in fluid communication with the air moving arrangement; and

a control system interfaced to the air moving arrangement, the control system operable to determine a measured airflow based at least in part on signaling from the integrated airflow sensor and a linearity characteristic of the integrated airflow sensor.

2 (original). The air sampler of claim 1 wherein the control system further comprises a feedback control mechanism to maintain the measured airflow substantially in accordance with a target value.

3 (currently amended). The air sampler of claim 2 wherein the control system further comprises a controller disposed to receive the signaling and adjust an operating speed of the air moving arrangement based at least in part on the signaling and the linearity characteristic of the integrated airflow sensor.

4 (withdrawn). The air sampler of claim 3 wherein the signaling comprises signals from two temperature sensors disposed within an air stream, wherein a difference in temperature indicated by the signals is indicative of airflow.

5 (original). The air sampler of claim 3 wherein the signaling comprises a voltage which is indicative of airflow.

6 (withdrawn). The air sampler of claim 2 wherein the signaling is provided at least in part by a mechanical linkage.

7 (withdrawn). The air sampler of claim 3 wherein the signaling comprises a data stream.

8 (currently amended). The air sampler of claim 3 further comprising an external temperature sensor connected to the controller, and wherein the controller is operable to determine the measured airflow at least in part also based on an external temperature reading.

9 (previously presented). The air sampler of claim 3 further comprising a user display device connected to the controller operable to display the measured airflow.

10 (original). The air sampler of claim 3 further comprising a user input device connected to the controller, and wherein the controller is further operable to adjust the target value based on user input.

11 (currently amended). The air sampler of claim 10 further comprising an external temperature sensor connected to the controller, and wherein the controller is operable to determine the measured airflow at least in part also based on an external temperature reading.

12 (original). The air sampler of claim 2 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

13 (original). The air sampler of claim 3 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

14 (original). The air sampler of claim 8 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

15 (original). The air sampler of claim 11 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

16 (withdrawn). The air sampler of claim 1 wherein the control system further comprises a user input device to adjust the target airflow in response to user input.

17 (withdrawn). The air sampler of claim 16 wherein the signaling comprises signals from two temperature sensors disposed within an air stream, wherein a difference in temperature indicated by the signals is indicative of airflow.

18 (withdrawn). The air sampler of claim 16 wherein the signaling comprises a voltage which is indicative of airflow.

19 (withdrawn). The air sampler of claim 16 wherein the signaling is provided by a mechanical linkage.

20 (withdrawn). The air sampler of claim 16 wherein the signaling comprises a data stream.

21 (withdrawn). The air sampler of claim 16 further comprising an external temperature sensor connected to the controller, and wherein the controller is operable to determine the measured airflow at least in part based on an external temperature reading.

22 (withdrawn). The air sampler of claim 16 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

23 (withdrawn). The air sampler of claim 18 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

24 (withdrawn). The air sampler of claim 20 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

25 (withdrawn). The air sampler of claim 21 further comprising an integrated sampling media assembly disposed to be in fluid communication with the integrated airflow sensor and the air moving arrangement.

26 (currently amended). The air sampler of claim 1 wherein the control system is further operable to determine standard airflow from the measured airflow and the linearity characteristic of the integrated airflow sensor.

27 (original). The air sampler of claim 1 wherein the control system is further operable to store a history of environmental and sample related data.

28 (currently amended). The air sampler of claim 3 wherein the control system is further operable to determine standard airflow from the measured airflow and the linearity characteristic of the integrated airflow sensor.

29 (original). The air sampler of claim 3 wherein the control system is further operable to store a history of environmental and sample related data.

30 (currently amended). The air sampler of claim 9 wherein the control system is further operable to determine standard airflow from the measured airflow and the linearity characteristic of the integrated airflow sensor.

31 (original). The air sampler of claim 9 wherein the control system is further operable to store a history of environmental and sample related data.

32 (currently amended). A method of adjusting an operating speed for an air moving arrangement in an air sampler having an integrated airflow sensor, the method comprising:

calculating a measured airflow based, at least in part on a linearity characteristic of the integrated airflow sensor, and on at least one of, signaling from the integrated airflow sensor, a null offset value for the integrated airflow sensor, ~~a linearity characteristic for the integrated airflow sensor,~~ and a current environmental reading;

comparing the measured airflow to a target value to obtain a result; and

adjusting the operating speed of the air moving arrangement based on the result to maintain the measured airflow substantially in accordance with the target value.

33 (original). The method of claim 32 further comprising displaying the measured airflow.

34 (original). The method of claim 32 further comprising changing the target value in response to user input.

35 (currently amended). The method of claim 32 wherein the calculating of the measured airflow is also accomplished based in part on a current environmental reading comprising an external temperature reading.

36 (currently amended). The method of claim 34 wherein the calculating of the measured airflow is also accomplished based in part on a current environmental reading comprising an external temperature reading.

37 (currently amended). Apparatus for adjusting an operating speed for an air moving arrangement in an air sampler to maintain a measured airflow, the apparatus comprising:

means for sensing airflow;

means for calculating a measured airflow based, at least in part on a linearity characteristic of the integrated airflow sensor, and on at least one of, signaling from the integrated airflow sensor, a null offset value for the integrated airflow sensor, ~~a linearity characteristic for the integrated airflow sensor,~~ and a current environmental reading;

means for comparing the measured airflow to a target value to obtain a result; and

means for adjusting the operating speed of the air moving arrangement based on the result to maintain the measured airflow substantially in accordance with the target value.

38 (original). The apparatus of claim 37 further comprising means for displaying the measured airflow.

39 (original). The apparatus of claim 37 further comprising means for changing the target value in response to user input.

40 (original). The apparatus of claim 37 further comprising means for sensing an external temperature for use by the means for calculating.

41 (previously presented). The apparatus of claim 40 further comprising:

means for operating the air sampler for a plurality of sampling periods; and

means for updating the measured airflow during one of the plurality of sampling periods based on a change in external temperature as indicated by the means for sensing the external temperature.

42 (withdrawn). A method of operating an air sampler having an integrated airflow sensor, the method comprising:

obtaining signaling indicative of airflow from the integrated airflow sensor;

calculating a standard airflow based, at least in part, on at least one of, the signaling from the integrated airflow sensor, a null offset value for the integrated airflow sensor, a linearity characteristic for the integrated airflow sensor, and a current environmental reading;

displaying the standard airflow on a display device.

43 (withdrawn). The method of claim 42 further comprising adjusting the operating speed of an air moving arrangement based on user input in order to adjust the standard airflow.

44 (withdrawn). The method of claim 42 wherein the calculating of the standard airflow is accomplished based in part on a current environmental reading comprising an external temperature reading.

45 (withdrawn). The method of claim 43 wherein the calculating of the measured airflow is accomplished based in part on a current environmental reading comprising an external temperature reading.

46 (withdrawn). Air sampling apparatus comprising:

means for obtaining signaling indicative of airflow;

means for calculating a standard airflow based, at least in part, on at least one of, the signaling, a null offset value associated with the means for obtaining the signaling, a linearity characteristic associated with the means for obtaining the signaling, and a current environmental reading; and

means for displaying the standard airflow.

47 (withdrawn). The apparatus of claim 46 further comprising means for adjusting the operating speed of an air moving arrangement based on user input in order to adjust the standard airflow.

48 (withdrawn). The apparatus of claim 46 further comprising means for sensing external temperature.

49 (withdrawn). The apparatus of claim 47 further comprising means for sensing external temperature.